

NATURAL RESOURCES INSTITUTE

**NRI Report No: 2755**

**Rural Non-Farm Economy**

**Key emerging and conceptual  
issues in the development of the  
RNFE in developing countries  
and transition economies**

by

**Junior R. Davis (NRI) and Dirk Bezemer (ODI)**

**July 2003**

*The views expressed in this document are solely those of the authors  
and not necessarily those of DFID or the World Bank.*



**Natural  
Resources  
Institute**

**DFID** Department for  
International  
Development



World Bank

# Key emerging and conceptual issues in the development of the rural non-farm economy in developing countries and transition economies

## REPORT II

A study by Junior R. Davis (DFID, EPRD)  
and Dirk Bezemer (Imperial College at Wye)

## Contents

<b>1</b>	<b>RELEVANCE OF RURAL DIVERSITY AND THE RNFE.....</b>	<b>3</b>
<b>2</b>	<b>DEFINITIONS AND MEASUREMENT PROBLEMS .....</b>	<b>5</b>
2.1	THE RNFE .....	5
2.2	INCOMES AND LIVELIHOODS .....	6
2.3	ACTIVITIES, ASSETS AND DIVERSIFICATION.....	8
2.4	CONCEPTS, ASSETS, ACTIVITIES AND LIVELIHOODS .....	10
2.5	DIVERSIFICATION TYPOLOGIES .....	12
2.5.1	<i>Distress-push and demand-pull diversification.....</i>	<i>12</i>
2.5.2	<i>Other diversification typologies .....</i>	<i>13</i>
<b>3</b>	<b>ECONOMIC DIVERSITY AND GROWTH .....</b>	<b>18</b>
3.1	FACTORS ENABLING HOUSEHOLD AND ENTERPRISE DIVERSIFICATION.....	18
3.2	MOTIVATION FOR DIVERSIFICATION.....	20
3.3	FACTORS ENABLING GROWTH OF THE RNFE.....	20
3.4	SOCIO-CULTURAL ASPECTS OF RNFE GROWTH.....	22
3.5	LINKAGES BETWEEN THE FARM AND NON-FARM ECONOMY .....	23
3.6	RNFE, POVERTY AND INEQUALITY.....	24
<b>4</b>	<b>RNFE POLICY PROCESSES .....</b>	<b>26</b>
<b>5</b>	<b>CONCLUSIONS.....</b>	<b>29</b>
<b>6</b>	<b>REFERENCES .....</b>	<b>31</b>

## *Figures and Tables*

Figure 1	Potential sources of income .....	6
Figure 2.	A Framework for Livelihoods Analysis .....	11
Figure 3.	Diversification patterns .....	16
Table 1:	<i>The heterogeneity of rural non-farm activities.....</i>	<i>8</i>

# 1 Relevance of rural diversity and the RNFE

The purpose of this paper is to outline key emerging and conceptual issues in the development of the rural non-farm economy in less developed countries (LDCs) and transition economies. It is based on a conceptual framework where the rural non-farm economy (RNFE) is discussed as being either part of a growth strategy for the economy, or as a “defensive” survival strategy for the rural poor. For most rural people in developing and transitional economies, rural non-farm activities are part of a total livelihood activity set that includes farming: that is they are part of a diversified livelihood portfolio. The rural population in developing countries derive important income shares from rural non-farm activities. Ellis (1999) states that 30-50% is common in sub-Saharan Africa, and FAO (1998)<sup>1</sup> gives a mean figure of 42% for SSA. In Asia, and Latin America, FAO estimates the figures to be 32% and 40% respectively (Ellis (1999) gives appreciably higher estimates for South Asia).

There has been an increasing recognition recently that the rural economy is not confined to the agricultural sector, but embraces the broad spectrum of needs of all rural people including social service provision, economic activities, infrastructure and natural resources in rural areas (Csaki *et al.*, 2000). Since the 1970s, a large number of studies have investigated the role of non-agricultural economic activities for rural development. Evidence from the developing world suggests that economic diversity in the countryside has the potential to foster local economic growth and alleviate the rural-urban income gap and rural poverty.

These findings are also relevant to the post-socialist transition countries, where typically a large part of the population lives in rural areas, and economic growth and the reduction of poverty are significant challenges. This is particularly true for those transition countries that are outside Central Europe. Analysis of the transition process in general and of transition in the agricultural sector has generated a large literature, but less has been specifically devoted to the wider rural non-farm economy (RNFE). However, studies in this field are now being undertaken, since it is recognised that in the longer term the development of the rural non-farm sector is a critical factor in providing rural employment and income (see Bright, Davis *et. al.*, 2000; Davis and Pearce, 2001).

The rural non-farm economy (RNFE) is of interest to governments, bilateral and multilateral donor agencies, non-governmental organisations (NGOs) and development practitioners because of its increasing prevalence in both developing and transition economies. In many parts of the world, the number of poor people in rural areas exceeds the capacity of agriculture to provide sustainable livelihood opportunities. Even with a decline in fertility rates and a slowing of population growth, this situation will not change significantly. Out-migration is not possible for all types of people, and urban centres cannot (or should not, for economic and social reasons) be assumed capable of providing adequate livelihood opportunities for all those unable to make a living in agriculture. For these reasons, a healthy RNFE holds out the prospect of improved livelihoods for people living in rural areas. This set of circumstances puts the spotlight on the RNFE as a potential vehicle for poverty reduction in rural areas. The RNFE may:

---

<sup>1</sup> The FAO study summarises data from over 100 studies - focussing mainly on farm households (as opposed to rural town residents) - undertaken over three decades (1970's to the 1990's).

- Absorb rural surplus labour
- Help farm-based households spread risks
- Offer more remunerative activities to supplement or replace agricultural income
- Provide a means for the rural poor to cope or survive when farming fails
- Exploit rural comparative advantages (resources, location, labour costs)
- Foster rural growth
- Improve the overall quality of life, goods and services in rural areas

From a policy perspective, it is important to understand participation in the RNFE, particularly participation of the poor. Why do individuals enter the rural non-farm economy? What types of RNFE opportunities are accessible to them? Does participation in the RNFE contribute to an individual's "upward" or "downward" livelihood trajectory (a concept elaborated by Swift, 1998)<sup>2</sup>. Further, just as it is important to understand entry into the RNFE, it is equally important to understand exit – whether people remain in the RNFE or leave, either through choice or circumstance.

Answers to these questions can inform the development of policies that:

- Support the efforts of the rural poor;
- Protect them from deleterious livelihood trajectories; and
- Improve access to sustainable and remunerative non-farm livelihoods

Participation in the RNFE requires both *motivation* to enter the RNFE, and *ability* to access sustainable and remunerative livelihoods from it. These two aspects - motivation and ability - are important because the reasons why people enter the RNFE may have an implication for the types of access barriers faced – for example, a person who is forced to diversify into non-farm activities because of lack of access to credit to purchase seeds will in all probability also face problems in accessing credit to start up a new business. This might be termed *distress-push* diversification<sup>3</sup>. Conversely, those entering the RNFE for *demand-pull* i.e. in response to an observed market gap or entrepreneurial reasons are more likely to have access to higher entry barrier activities that allow accumulation (we discuss these two concepts in greater detail below in section 2.5.1). Setting aside the problem of how to define "low" and "high" asset endowments, we may for convenience simplify this to represent two extreme types. In one, the social unit (characteristically an individual or household) has low endowments of all types of capital asset: human, natural, physical, financial, social, whilst in the other, the social unit has high endowments. In practice of course, particular social units will have particular endowments of different types of asset, thus there would be a multi-stranded spectrum of asset endowment, each strand corresponding to a type of asset. Particular configurations of

---

<sup>2</sup> When thinking about the rural non-farm economy, it is important to realise that different social units are constantly engaged in a dynamic process of livelihood adaptation. Taking the unit of the household: households operating within a particular livelihood system may be on any of a number of different livelihood trajectories. These may be "downward", in the sense that there is a process of disaccumulation of assets; "upward" in which case there will be asset accumulation; or more or less constant in the sense that the household asset base is neither expanding nor contracting. In each of these different scenarios, the role and importance of off-farm strategies takes on a different meaning.

<sup>3</sup> Reardon *et al.* (1998) suggest that when relative returns are higher to the RNFE than to farming, and returns to farming are relatively more risky, "pull" factors are at work. Conversely, when farm output is inadequate and opportunities for consumption smoothing, such as credit and crop insurance, are missing, or when input markets are absent or fail and the household needs cash to pay for farm inputs, "push" factors are at work. As evidence of distress-push, wages or incomes are likely to be lower in the rural non-farm economy.

contextual factors - such as the policy environment, institutions and the vulnerability context - combined with particular configurations of asset endowments will result in differing RNFE entry motivations, access capabilities and livelihood trajectories. These livelihood strategies may be better understood by seeing them as being on a spectrum between 'demand-pull' and 'distress-push' diversity. The purpose of this paper is to outline key emerging and conceptual issues in the development of the rural non-farm economy in less developed countries (LDCs) and transition economies. It is based on a conceptual framework where the RNFE is discussed as being either part of a growth strategy for the economy ('demand-pull'), or as a "defensive" survival strategy for the rural poor ('distress-push'). Section 1 considers RNFE definitional and measurement issues. In section 2, the paper provides an overview of the relevance of rural non-farm economy (RNFE) and the key concepts underlying it and livelihood diversification. Section 3 explores the RNFE and local economic growth followed by discussions on the potential for growth of the RNFE, the linkages between the farm and non-farm sectors. Section 4 provides a brief discussion of policy processes.

## **2 Definitions and Measurement Problems**

### **2.1 The RNFE**

In this study the rural non-farm economy (RNFE) is defined as being all those income-generating activities (including income in-kind) that are not agricultural but located in rural areas (Lanjouw and Lanjouw, 1997). A key term in this definition of the RNFE is "rural". The OECD (1996) classifies predominantly rural areas as those where more than 50 per cent of the population live in rural communities, and significantly rural areas as those where between 15 and 50 per cent live in rural communities; but different studies include very different definitions of 'rural'. 'Agriculture' is here taken to mean all primary production of food, flowers and fibres - it thus includes growing crops, rearing livestock, horticulture (flowers, fruit and vegetables), forestry and fisheries. It excludes any food processing (although this may happen on-farm), agricultural services (whether technical or commercial) and also other primary sectors such as mining or quarrying.

This definition is not solely activity based (waged work or self-employment), as it also includes non-earned income (social payments, remittances) as well as the rural institutional framework (roads, schools, hospitals etc.), which are an integral part of the rural economy. This also includes social payments (pensions, social insurance etc.), which are often a significant source of unearned household income, but for which there is no activity undertaken by household members (in contrast with remittances or asset income). However social payments have a clear impact on the RNFE as they reduce poverty levels, influence household work-leisure decisions, and may create opportunities for investment.

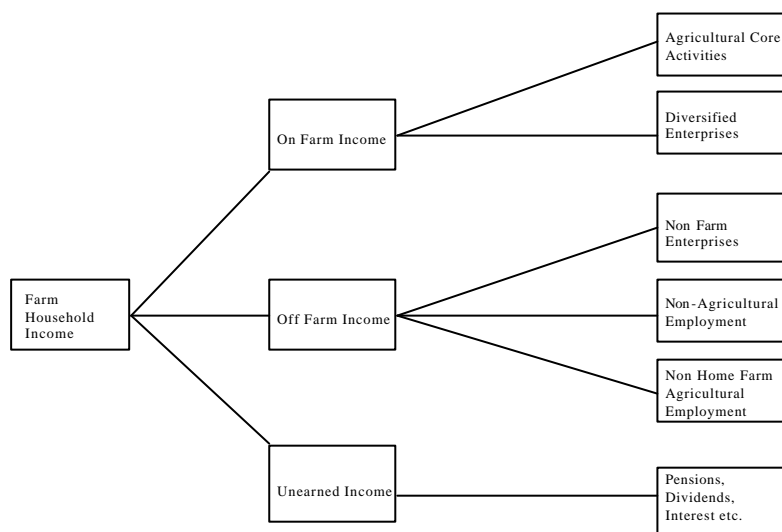
Thus the RNFE might include agro-processing, the setting up of a small business, or the receipt of transfer payments such as interest, dividends or remittances from temporary, seasonal, or permanent migration. The RNFE incorporates jobs which range from those requiring significant access to assets, such as education or credit, to self-employed activities such as the roadside "hawking" of commodities which have low barriers to entry and low asset requirements (Davis and Pearce, 2000). As regards the concept itself, it could be argued that the term 'RNFE', although in common usage is technically incorrect, as non-agricultural activities may actually take place on farms. Thus, although the *rural non-agricultural economy* would be a more accurate definition, the terminology in this paper conforms to

usage in the literature, where the focus is often on ‘farm’ versus ‘non-farm’ or on ‘on-farm’ versus ‘off-farm’ activities.

## 2.2 Incomes and Livelihoods

Davis and Pearce (2000), in a review of the level of RNFE diversification, assert that it is important to consider the potential sources of income available to each farm or rural household. These are shown in Figure 1 for the case of a farm-based household. The traditional main component here has been income from agricultural core activities.

**Figure 1 Potential sources of income**



*Source: Davis and Pearce, 2001.*

In defining RNFE income, diversification and other economic activities of farmers and rural dwellers, two central problems emerge: (i) capturing the appropriate unit for income analysis, and (ii) recognising and ordering the multiple nature of income sources.

The question of which the appropriate unit might be for income analysis is important, and partly relates to social and cultural factors. The most obvious units would be either the ‘individual’ or the ‘household’. The definition of the former is not in doubt. The latter – the household – is not so straightforward, since the co-resident unit is not always the only economically relevant unit in terms of production or consumption. There may be smaller units, which are relevant where there is an extended or joint family situation, or there may be larger units where closely related households collaborate and co-operate in activities that are economically significant. It might be argued that the most appropriate unit should be identified in the specific cultural and social context; however this presents additional empirical problems because it means that it is difficult to draw out parallels and differences between different countries, and even between different regions of the same country. One undisputed characteristic of households is that members in it share income to some extent.

A disadvantage with this focus on household livelihoods and household incomes is that it provides no insight into enterprise behaviour. Its main advantage is that it is better suited for measurement purposes: all rural income from whatever source sooner or later ends up in household wallets. However, micro- and small-scale rural enterprises have often been investigated as potential motors of local economic growth (ref.). The dynamics, drivers and barriers for these businesses are not fully captured by the livelihoods approach. They are usually captured as family businesses, but not once they go beyond the size of a micro-enterprise.

By defining rural economic diversification as all rural income generation other than food production, large heterogeneity in the activities undertaken by, or sources of income of, rural households and enterprises is implied (Start, 2001:496). This 'bewildering diversity' (Haggblade *et al.*, 2002) implies problems of concepts and definitions relating to both the unit of measurement and the definition of incomes and activities (Bagchi, 1998; Barrett *et al.*, 2001; Reardon, 1998). In response, many dichotomies or categorisations have come to be used in empirical research to address the above problems of defining and measuring the RNFE, such as off-/on-farm, business/wage income, local/urban activities, earned/non-earned income, tradable/ non-tradable, activity-based/income-based, etcetera.

Davis and Pearce (2000) suggest that one approach is to study the components of potential sources of income (see Figure 1). In the case of farms, on-farm income can come both from agricultural core activities and non-agricultural activities. Potential sources of non-agricultural income can be divided into three components: income from non-agricultural employment; non-farm enterprises; and remittances. As such, one can distinguish between enterprise and income diversification. Enterprise diversification activity embraces both on- and off-farm business creation outside of agricultural cores activities. Income diversification will embrace these two components plus any movement towards non-farm employment (whether agriculturally based or not). Finally, a third source of revenue is unearned income (such as remittances, pensions, dividends and interest), which while usually ignored, can be very substantial, and decisions made in this sphere may have an important bearing on such crucial choices as time of retirement and intensity of farming.

Thus, potential sources of income are disparate, likely to vary substantially in importance between rural households, and exhibit wide variations in their attractiveness as sources of financial gain. These variations between components of income are therefore likely to have a major effect on the decision making of rural households and individuals and there is a need to understand the importance of each, rather than subsuming them all into binary classifications such as the part/full-time dichotomy<sup>4</sup>. Moreover, there is no reason why RNFE income diversification has to be either about setting-up new enterprises or even be farm based at all – for many, other, intermediate options may prove more fruitful or promising (Pearce and Davis, 2000). This heterogeneity is one of the reasons why the concept of livelihoods, introduced in section 1, is more appropriate as it encompasses all income sources.

---

<sup>4</sup> See Mishra and Goodwin (1997) who address farm income variability and how this affects the supply of off-farm labour. They also attempt to test whether spouses make joint decisions in terms of their off-farm employment activity. Of course, their paper assumes that markets function efficiently, again not always the case in rural LDC economies. However, utilising an econometric approach, the authors found that the off-farm labour supply of farmers is positively correlated with the riskiness of farm incomes; that farmers and their spouses with more farming experience are less likely to work off-farm; and that off-farm labour supply is correlated with off-farm experience.



## 2.3 Activities, assets and diversification

Rural non-farm activities may be defined in a number of different ways. One simple distinction is between waged and self-employment. This is a functional distinction. In addition, activities may be classified according to sector (e.g. primary sector vs. secondary sector) and / or space. See Barrett and Reardon (2000) who explore these distinctions in great detail. RNFE activities may fall anywhere within the shaded part of Table 1 below:

**Table 1: The heterogeneity of rural non-farm activities.**

	<i>Primary</i>				<i>Secondary</i>		<i>Tertiary</i>	
	<i>Agriculture</i> <sup>5</sup>		<i>Mining / Other extractive</i>		<i>Manufacture</i>		<i>Services</i>	
Waged employment	L	M	L	M	L	M	L	M
Self employment	L	M	L	M	L	M	L	M

Source: Barrett and Reardon (2000: 40).

Key: L = local; M = migratory<sup>6</sup>

The situation is, however, even more complex than that depicted by table 1, because in addition to the three way classification, it is also important to make a distinction between the asset implications of particular activities. That is, it is important to distinguish between activities that accumulate, spread or denude assets. Activities and assets are difficult to measure for some of the same reasons that incomes are i.e., complexity, oversight and respondent/ subject recall problems, dubious legality of certain activities and certain (financial) assets. In addition, there are further valuation difficulties in relation to assets (Barrett and Reardon, 2000: 27), and certain types of activity:

- The quantity of the asset may not be known accurately (this is common with land, for instance);
- It may be difficult to value assets for which no local market exists;
- Some assets are held in common with other households; describing a “share” is difficult;
- Some of the most important assets - especially components of human capital (e.g., skills, health) and social capital (e.g., capacity to make claims on others) - are difficult to observe accurately;

<sup>5</sup> Ellis (2000(b): 12) makes the point that there are no hard and fast rules governing income classifications (and the same can be said for activity classifications). “Agriculture” may be taken as a rough shorthand for renewable natural resources, so that gathering / cultivation of forest products and fishing are also included. This is the definition used in this paper reflecting a perceived need to correct for past oversight in focusing largely on agriculture, forestry and fisheries in rural areas. Non-farm activity includes agro-processing and trading activities, neither of which is primary production, even if conducted on farm.

<sup>6</sup> Migratory activity and incomes are tricky subjects. Rural non-farm activity could not include the activities of permanent migrants. The same cannot necessarily be said however for rural non-farm incomes, as under some definitions, remittances from former members of the household who have permanently moved away would be regarded as unearned rural non-farm income. In this paper, unearned income from such sources is included in our definition of the RNFE.

- It is difficult to observe (in a survey) quality differentiation (e.g., soil quality, animal health);
- There may be multiple activities undertaken by several household members over several seasons of the year;
- Some activities are illegal or “informal” and are therefore not readily reported;
- The activities are often undertaken part-time and mixed with other activities (such as operating a small-scale retail commerce business mixed with household chores and farm labour in a given season).
- There are also several income valuation problems given the diversity of income sources, non-monetary income (e.g. barter), levels of remuneration, and empirical problems in accurately measuring and collecting reliable income data in less developed countries.

To illustrate the difficulties we contrast the methods used by Fafchamps and Minten (1998) with those of Minde and Nakhumwa (1997). Both pairs of authors were trying to understand the activities of small traders. Fafchamps and Minten attempted to quantify social capital amongst agricultural traders and their clients in Madagascar using a questionnaire based sample survey for data collection and econometric techniques for analysis of data<sup>7</sup>.

Explicit consideration of social capital in quantitative analysis is a useful and relatively new development in research of this kind. The authors were aware, however, of problems of underreporting. For example, Fafchamps and Minten (1998) note that they were unable to trace traders who are the “least formal and have the least permanent form of operation”. This was because they used a standard two round sample survey and were thus unable to trace the more itinerant traders interviewed in the first round. The importance of social capital to this type of trader and vice versa is therefore not explored. Secondly, the authors also note that *“Indo-Pakistani traders, who constitute a small minority of traders, tended to refuse participation to the survey”*. The reasons for or implications of this are not discussed. However, experience suggests that traders can be very suspicious of researchers who record responses on forms or in writing. More generally, accessing information on “shady” or illegal activities remains problematic with a standard sample survey methodology. The fact that such activities are known to be widespread and important sources of income diversification in many rural areas has implications for the accuracy of – amongst other things – attempts to quantify social capital.

It is probably the case that gathering accurate information on certain types of activities requires a high degree of trust, and that this can only be developed over time scales which are typically much longer than those set aside for relationship building in most sample surveys. The need to develop relationships over time is highlighted in a study of informal cross-border trade between Malawi and her neighbours (Minde and Nakhumwa (1997)). This activity is known to be a key source of livelihood diversification amongst rural people around Malawi’s borders (Whiteside, 1998). Like Fafchamps and Minten, the authors were studying trading activities, in contrast however, they used more qualitative methods and monitored over a full calendar year. Minde and Nakhumwa (1997: 13) note that: *“...there was considerable*

---

<sup>7</sup> It is important to measure social capital because this can have important implications for the operation of labour markets and barriers to entering the RNFE. For example, certain employment opportunities may not require a great deal of capital, experience or skill, but a friendship or kinship relationship might be an important determinant of access. Fafchamps and Minten suggest that social capital can “...substitute for perfect markets and enable agents to economise on transactions costs.”

*suspicion about the monitors during the first two months of the survey because they were mistaken for either policemen, or customs personnel". This problem was tackled by the monitors actively distancing themselves from police and customs personnel and through a process of getting to know individual traders informally. "Because the traders tended to work along fixed routes, fixing the monitors allowed a rapport to develop between them, thereby facilitating collection of valid and accurate information" (ibid, p 13).*

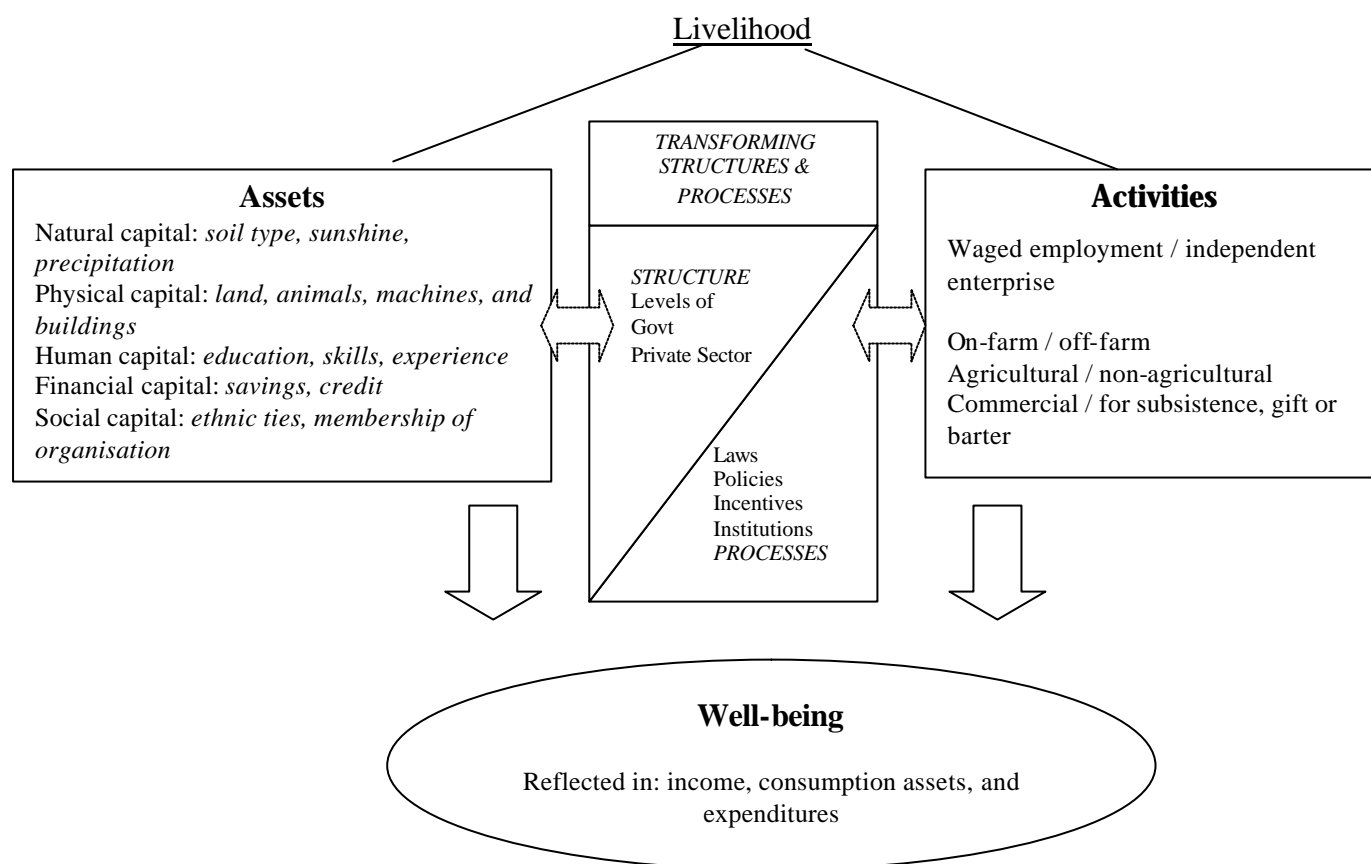
## **2.4 Concepts, assets, activities and livelihoods**

This report is structured around the concepts of livelihood and diversity. 'A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access gained to these ... that together determine the living gained by ... the household' (Ellis, 2000:10).

*Assets* form households' endowment of resources with which to gain their living. In this definition, the conventional meaning of assets is expanded to include, besides material and financial resources, also household members' skills and experience (human capital) and their relations within wider communities (social capital). This inclusive definition, as well as use of the term 'capital' in these senses, is not uncontroversial (Fine, 1999), but it serves to highlight several unifying features of diverse resources. They require investment, in terms of time or money, in order to be obtained or formed. They can (but need not) be used in an economically productive way. And in doing so, they are (imperfectly) substitutable and complement household labour.

*Activities* comprise all the ways in which household members utilise their non-leisure time to support their livelihoods. This broad definition includes work and care, employment and entrepreneurship, agricultural production and trade, and a range of other dichotomies, some of them depicted in Figure 1. Engagement in activities both requires assets and may increase households' stock of assets. Households' endowment of assets and involvement in activities jointly support their level of well-being (Figure 2).

**Figure 2. A Framework for Livelihoods Analysis**



Source: Adapted from Ellis (2000:30)

The second central term in this paper is *diversity*, which follows naturally from the idea of livelihood. Diversity in a household's activities and income (which is one measure for a household's living standard) *refers to the existence, at a point in time, of ... different household income sources...* (Ellis, 2000:14). Given heterogeneity in assets, diversity in income is almost implied. Indeed, both individual and household income normally derives from more than one source: income diversification is the norm, specialisation the exception (Barrett *et al*, 2001).

Typically, household income diversity is especially large in rural areas. Rural households are more often producers as well as consumers, which implies the presence of profit (from sold output) or in-kind income (if output is consumed) as income components in addition to, for instance, wages. Also, the relatively lower remuneration of capital and labour and the more limited market development that often characterises rural areas make it less likely that any single source of income is sufficient to meet rural household needs.

For similar reasons, income diversity is particularly relevant to developing economies. In this context, it is unsurprising that theorising about, and empirical study of, the economics of livelihoods and diversity mainly draw on evidence from the developing world (Reardon *et al*, 1998; Start, 2001; Haggblade *et al*, 2002) and, more recently, also from the transition economies in Central and Eastern Europe and the former Soviet Union. Of particular interest is the evolution of diversity, i.e. the process of diversification of activities and incomes. This is how households respond to changes in their economic environment, drawing on their

various assets and with the aim of preserving or improving their livelihoods. As reflected in the definition of livelihoods, they are enabled or restricted in doing so by their social and economic environment.

## 2.5 Diversification typologies

### 2.5.1 *Distress-push and demand-pull diversification*

In studying households' diversification strategies, it is important to account for the fact that the motivations, means, and outcomes of diversifying are heterogeneous. The two extremes in this respect are, on the one hand, the traditional belief that diversity of activities would signify a lack of economic development. Diversity is then juxtaposed with specialisation of labour and efficiency gains (Lewis, 1954). On the other hand, more recently rural diversity in activities and incomes have been identified as a potential motor for rural economic growth through additional income generation and production and consumption linkages between agriculture, industry and services (Reardon *et al*, 1998; Start, 2001; Haggblade *et al*, 2002). Although such effects have been observed, rural diversity *per se* is clearly not a panacea for rural development (Lanjouw and Lanjouw, 1995; Piesse *et al*, 2001; Deininger and Olinte, 2001).

An approach that is more sensitive to the different potentialities of rural diversity is suggested by a distinction in the literature between 'demand-pull' and 'distress-push' diversification (e.g. Efstratoglou-Todoulo (1990); Reardon, 1999; Ellis, 2000; Barrett *et al*, 2001; Pearce and Davis, 2001; Haggblade *et al*, 2002). Distress-push diversification typically occurs in an environment of risk, market imperfections, and of hidden agricultural unemployment, and is typically triggered by economic adversity, which sets the household on a downward income trajectory. It implies engaging in economic activities that are less productive than agricultural production could be on a full-employment basis, and is motivated by the need to avoid further income decreases. Demand-pull diversification, on the other hand, is characterised as a response to evolving market or technological opportunities, which offer the opportunity of increasing labour productivity and household incomes<sup>8</sup>. This distinction suggests a number of specific inferences in terms of the relationship between diversification strategies, household characteristics and the socio-economic environment.

Regionally, distress-push diversification will dominate in rural areas which have one or more of the following characteristics: geographical isolation, low-quality physical infrastructure, low human capital, underdeveloped markets, resource scarcity, or recent shocks to the natural environment, the economic system, or the agricultural sector. Demand-pull diversification would be possible in the presence of expanding technological innovations (whether within or outside agriculture) market development, or intensifying links with markets outside of the local economy (Davis and Pearce, 2000).

Within any rural area, distress-push diversification attracts households in a rural population, which are less well-endowed, or which have lower incomes. These households will enter non-agricultural activities that are, on average, less rewarding (e.g. in terms of labour productivity)

---

<sup>8</sup> Several studies in Asia (cited in Islam, 1997) show that the poorest groups (the landless and small farmers) diversify into activities where wages are no higher than those in the agricultural sector, whilst higher income groups (larger farmers) also diversify, but into better paid sectors. Peters (1997) has observed a similar process in rural Malawi.

than demand-pull diversification activities, since the higher-return activities typically require higher investment that only the richer households can afford. For instance, poorer households will obtain a larger share of their non-agricultural income from wage employment, while richer households have better opportunities to enter non-agricultural activities in their own independent enterprise. Third, since income inequality is typically such that there are more relatively poor than relatively rich households, distress-push diversification will be more prevalent than demand-pull diversification. Fourth, distress-push and demand-pull diversification activities will be more clearly separately observable as inequality is larger.

One implication of this approach is that the distribution of diversification activities over households would follow a bimodal distribution over household incomes in the presence of both demand-pull and distress push diversification, there would be two clusters of low-return and high-return activities, which are engaged in by poor and affluent households, respectively<sup>9</sup>. Moreover, if distress-push diversification dominates, we would expect that poorer households are more involved in diversification than others. In the case of predominantly demand-pull diversification, we would expect that higher income households engage more in non-agricultural diversification than the poorest households. This relationship between returns to diversification activities and income levels of households engaged in them is reflected in some empirical findings on rural diversity (see Seppala, 1996; Carter and May, 1999).

This framework is one way of accounting for varied evidence on the diversification-income relationship from different geographical areas, signifying different rural development patterns (Deininger and Olinte, 2001; Start, 2001; Imbs and Wacziarg, 1999; Piesse et al, 2000). The distinction between demand-pull and distress-push diversification is also useful for evaluating the economic significance of the RNFE. In many developing countries, particularly in South Asia, demand-pull diversification is occurring, signifying rural economic growth in the sense of increasing efficiency (Haggblade *et al*, 2002). In contrast, in many transition economies, it appears that household diversification has often been occurring during a downhill trajectory of household incomes - which would be distress-push diversification - and in conditions of a general 'primitivization' of the economy, i.e. a decrease in the value-added in the economy (Hedlund and Sundstrom, 1996; Ellman, 2000).

### 2.5.2 *Other diversification typologies*<sup>10</sup>

Based on the peasant economics literature, we could in theory identify two principal components when analysing the process of non-farm diversification: income and activity<sup>11</sup>. The income-driven non-farm diversification hypothesis assumes diversifiers are profit-maximisers while the second, activity-driven non-farm diversification points to the different comparative advantage of household members as underlying incentives for non-farm diversification (Ellis, 1993: 65-81; 146-123). Thus, two types of non-farm diversification

---

<sup>9</sup> What about those that are neither rich nor poor? Although numerous analyses of the RNFE and diversification tend to distinguish between these two extremes, often the situation on the ground is not that clear-cut, so it is important that diversification typologies are not oversimplified.

<sup>10</sup> This section of the report is very much a "work in progress", in terms of thinking through the process of livelihood diversification, identifying broad concepts and patterns of diversification.

<sup>11</sup> For an analysis of peasant economics see Ellis, 1993.

may be defined as follows: the first, *income-driven* diversification, coincides with a period of capital accumulation (including financial and social capital, and information) while the second type, *activity-driven* diversification often occurs later, when the afore-mentioned capital accumulation has already taken place. Income diversification does not necessarily exclude activity diversification; we see it as a mixed and dynamic process, with income and activity diversification (depending on the household) often overlapping or occurring at the same time. Thus, for many rural poor households capital accumulation is *the consequence* of income diversification, not the aim of income diversification.

We would argue that there are two stages, which are the components of a process that is not necessarily sequential, but cyclical. First, the income-dominant phase is more linked to the aim of covering households' basic needs. This phase will be dominant so long as meeting basic needs are the households' main priority, as reflected in low levels of income. When incomes are securely above a particular threshold, a certain amount of capital (whether financial, education, physical, land, etc) may be accumulated. This is a consequence of the income-diversification stage). This enables the activity diversification motive to become more important, allowing household members to pursue their comparative advantages in selecting particular activities, freed from the necessity of catering for basic needs by whatever means are available to them.

It bears repetition that, although we have described this as a sequential process, it should be thought of as a dynamic (possibly cyclical) process, with the dominance of one or another type varying from one stage to another (as a new income allows the addressing of needs but also other potential investment opportunities). Income-driven diversification places stress on obtaining the necessary income to cover basic needs while activity-driven diversification makes use of surplus resources once the main income source(s) is (are) assured and thus encourages a more active entrepreneurial behaviour – i.e. demand-pull diversification.<sup>12</sup>

To identify which of the two non-farm diversification drivers are most prevalent at the village (NUTS-5)<sup>13</sup> level, Davis and Cristoiu (2002) in Romania and Davis (2002) in Armenia, constructed two ratio based income and activity diversification indices. Davis (2002) applied them to village/ rural municipal level activity and employment data<sup>14</sup>. They found that a key

---

<sup>12</sup> It should be noted that it is possible to look at two different aspects of the same problem. The theoretical observations offered above have been framed in terms of groups of households. However, if we consider each individual, it is as likely that the first impulse for diversification is income (primary diversification) and then activity driven (secondary diversification). To a certain extent this could also be applied to a single household, assuming that all its members have the same goal and comparative advantage. Thus, at an individual household level diversification could be considered a sequential process. On the other hand, as we have argued above, different households are usually at different stages of development (or capital accumulation) so for some of them the income-driven stage will predominate while for others activity-driven diversification would be more important.

<sup>13</sup> The [NUTS](#) nomenclature (Nomenclature of Territorial Units for Statistics) is a five-level hierarchical classification (three regional levels and two local levels) drawn up by [Eurostat](#) to provide a single uniform breakdown of territorial units for the production of Community regional statistics, for socio-economic analyses of the regions and for the framing of Community regional policies.

<sup>14</sup> The data used comprised two components: a) regional employment data (in agriculture, public sector, non-agriculture, etc); and b) regional data based on types of activities (as handicrafts, trade/commerce, services etc). Thus, the estimated income ratios included those having a source of income (from employment) while activity ratios included those into non-farming activities (as they were recorded in the Government databases). This differentiation (income and activity) was drawn by the way the data was collected for the database. See Davis and Cristoiu 2002, for a fuller explanation of the approach.

weakness of these ratios was that they did not consider ‘agriculture’ itself as a possible second income generating activity. A more detailed approach to diversification patterns should consider pure Non-Farming Rural Diversification and Hybrid Non-Farm Rural Diversification. The former takes into account only those individuals having a secondary non-farming activity while the latter accounts for both farming and non-farming activities (i.e. the ratio of the *active population* with a secondary occupation in farming or non-farming *w.r.t* the total active population). Nonetheless, diversification of the economy might very well imply specialisation of households, so these indices reveal little about household-level diversification strategies (see Davis and Cristoiu, 20002 for a full explanation of the approach).

There are many interesting ways of thinking about livelihood diversification, some of which we have touched on above and other “ideas in progress” which we will briefly outline below. When considering the *type of activities* in which an active population is involved, three different diversification patterns may occur: (i) *inside*-; (ii) *ebb*- (or distress-push) and (iii) *flow* - (or demand-pull)<sup>15</sup> diversifiers.

*Inside-diversifiers* are those choosing a second job in the same domain (either agricultural or non-agricultural sector) as their primary activity (e.g. a farmer with a secondary activity of off-own farm work for cash). This would be most common in the case of low capital endowments (financial or human), or among those rural inhabitants who are not prepared to assume the risks of entering into a different activity domain.<sup>16</sup> However, there are some exceptions to this case, such as roadside hawkers and “higglers”.

*Ebb-diversifiers* are those whose primary activity (job) is in the non-farm domain and choose a second activity (job) in the agricultural sector. A predominance of *ebb-diversifiers* would indicate a situation where either non-farm income does not cover subsistence needs, forcing people back into agriculture, or where there are distorted agricultural prices (either high due to low levels of agricultural productivity and efficiency, or low due to state policies aimed to protect low income consumers in urban areas but with a concomitant de-capitalising impact in farming communities).

*Flow-diversifiers* are those with a primary activity (job) in agriculture and a second activity in the non-farm economy. These are the demand-driven, risk-taking diversifiers, often having a better financial and/or human capital endowment, hence better equipped to take advantage of market opportunities, and thus able to diversify. It may also be the case that these flow-diversifiers cannot find opportunities for diversification within agriculture and therefore try to re-orient their activities (and/or sources of income) to non-agricultural activities. Figure 3 summarises the possible diversification patterns outlined above.

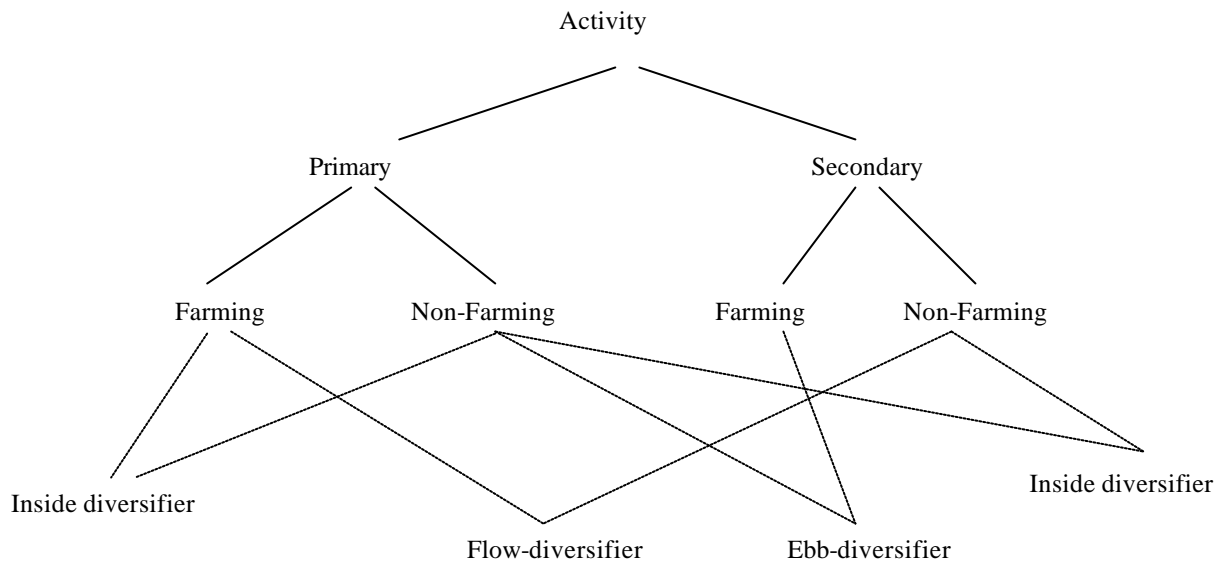
---

<sup>15</sup> *Ebb* and *flow* diversifier notions are more illustrative in the context of developing and transition economies, emphasising the dynamic character of diversification in an unstable economic environment. This suggests that diversification does not have a permanent character.

<sup>16</sup> It should also be noted, that sometimes diversifying within the same activity domain can in fact increase risk, not lessen it as income fluctuations tend to co-vary.



**Figure 3. Diversification patterns**



Source: Davis and Cristoiu, 2002

To illustrate further, a farmer running a processing plant is considered an *inside diversifier* if the plant processes agricultural output (i.e. a bakery) and a *flow diversifier* if what is processed is non-agricultural (i.e. TV set production). Regarding the *ebb* and *flow* terms: we are trying to suggest a possibly unstable (fluctuating) labour market so that people will use farming as a temporary buffer or safety net during unemployment periods or temporary lack of opportunities in their main expertise domain; thus they may return to their main area of expertise or job when they identify an opportunity to do so (e.g., an unemployed factory worker will temporarily move into agriculture to cover his/her basic needs but on identifying an opportunity to return to their job at a factory, will flow-out of agriculture (unless the agricultural income is higher than they would obtain at the factory). We view this as an *ebb-flow* non-farm diversification = temporary movements inside-outside agriculture.

Davis and Cristoiu (2002) in Romania and Davis (2002) in Armenia identify which of the two non-farm diversification drivers are most prevalent at the village level, found that most people in both countries have had more than one job based on a process of income diversification. In Romania, Davis and Cristoiu (2002) found that with more than half of the population living in poverty, the main priority of rural inhabitants was to cover their basic needs. Davis' (2002) study of Armenia shows that there appears to be a relatively low level of non-farm diversification. In Armenia 63.5 percent of the surveyed rural population is primarily employed in farming, 25% in the purely non-farm group and the remaining 11.3% in the hybrid diversifiers group. Davis and Cristoiu (2002) found that the level of non-farm diversification in Romania was higher with around 46% of the population primarily employed in agriculture and 37% in non-farm employment with 17% hybrid diversifiers. As regards the diversification patterns observed at the level of the sampled Armenian and Romanian communities they found that Inside-diversifiers, i.e. those who select their secondary activity from the sphere of their prime activity, diversify within their primary branch mainly because of the shortage of capital (mainly financial) and/or their reluctance to take risks. In all the

surveyed communities, there are more flow-diversifiers (main activity farming, secondary activity non-farm), than ebb-diversifiers (main activity non-farm, secondary activity farming). Thus, farming is the most frequent primary activity in rural areas. The differences are largest in the most affluent regions (in terms of per capita GDP), where the population has a better financial situation and can afford to diversify for demand-pull reasons. The share of ebb-diversifiers was only larger in a few communities, typically those which had well-developed tourism/ day-tripper services and facilities, as well as a vibrant natural resource based industry e.g. fishing or forestry (see Davis, 2002; and Davis and Cristoiu, 2002). Although secondary employment is probably under reported in official Government statistics for both Armenia and Romania appropriate policies and programmes need to be put in place which consider both local endowments and human capital characteristics (in terms of gender, education, age, etc) to promote the RNFE.

### 3 Economic Diversity and Growth

Taking a livelihoods view on rural economic diversity implies a holistic perspective that goes beyond defining and measuring the size of the RNFE. The distress-push / demand-pull distinction introduced in section 1 suggests that there are different prerequisites, constraints, motivations and outcomes for households engaging in the RNFE (see Ellis, 2000; Barrett *et al*, 2001; and Haggblade *et al*, 2002, for more detailed surveys).

#### 3.1 Factors enabling household and enterprise diversification

One approach in exploring these factors is to realise that development of the RNFE is one form of local economic growth. There are a number of factors that are important for (regional) economic growth in general, including growth of the RNFE through diversification of farm activities or through the operation of non-farm enterprises. Such economic growth through increased diversification may be apparent in both increased diversification of farm activities, in increasingly diversified household income sources, and in changes in the distribution of income, leading to larger or smaller rural income inequality.

Not surprisingly therefore, the literature on rural household specialisation and diversification, is largely based on evidence from the developing world; and the literature on the factors underlying regional economic growth largely overlap. We may distinguish between household/enterprise-level factors and group (village, region) level factors that affect the distribution of household labour over income sources, and thus diversification. Household/enterprise-level factors include:

- *Asset endowments* (such as land, livestock, real estate) and savings, i.e. wealth, as well as income levels increase the opportunity to invest in education, contacts or in productive assets that generate income either through entrepreneurship or wage labour. It could be argued that asset endowment is more important because many LDC markets, particularly credit markets, either function poorly or are non-existent. Endowments and the level of income tend to encourage specialisation in the most productive activity.
- *Access to markets*. Markets may be generally absent or malfunctioning in a region (i.e. land markets, credit markets), or they may be inaccessible for people (typically the rural poor) with low social, financial or human capital. Market access is also determined by factors such as distance to markets, access to transport infrastructure and telecommunications, access to market information, the quality of goods and services produced, volumes produced, etc.
- *Human capital attributes* – age, skills, education – broadens the set of employment and entrepreneurial options for individuals. Household age composition (usually assessed in the form of dependency ratios) and education levels are an often-cited measure of human capital used empirically to explaining the degree of participation across a wide range of income groups in the rural non-farm economy. For example, Abdulai and Delgado (1999) found that the probability of participation in non-farm work increases with age up to 33 for men and 30 for women, and is thereafter inversely related to age. A higher level of education is positively correlated with a higher probability of participation for both husbands and wives in the RNFE, and is higher for wives than husbands. However, a higher level of educational attainment for a wife lessens the probability of the husband

participating in the RNFE. Women's participation in non-farm work was more sensitive to a lack of household cash than their husbands' participation. Yet despite the intuitive appeal of these findings, the relationship between incomes and education is not that clear-cut. Lanjouw (1999) suggests that educational credentials may be used to ration access to scarce regular non-farm employment opportunities. A general increase in education levels may ratchet up the educational requirement (regardless of its practical use) - or result in a shift to other selection criteria, still tending to exclude the poor.

Reardon *et al* (2000) argue that where access to education is fairly equally distributed, the effect will be to equalise the overall size distribution of income. Moreover, where there are more non-farm employment opportunities with low education requirements, rural non-farm income inequality should be less. FAO (1998) attribute the poor distributional consequences of RNF participation in Africa to a scarcity of labour-intensive activities that have low entry barriers.

- *Social capital* – participation in social networks also broadens the set of employment and entrepreneurial options for individuals. The concept of social capital has several different interpretations. Fafchamps and Minten (1998) provide two definitions from an economist's perspective:

*"The first meaning sees social capital as a 'stock' of trust and an emotional attachment to a group or society at large that facilitates the provision of public goods ... The second meaning sees social capital as an individual asset that benefits a single individual or firm; this meaning is sometimes referred to as social network capital to emphasize that agents derive benefits from knowing others with whom they form networks of interconnected agents."*<sup>17</sup>

From a livelihoods perspective the second definition is perhaps most pertinent for this paper. If social relationships are not taken into account, the significance of barriers to entering the RNFE may be seriously under or over-estimated. For example, certain employment opportunities may not require a great deal of capital, experience or skill, but a friendship or kinship relationship might be an important determinant of access (see Davis, 2002; and Bleahu 2002). Fafchamps and Minten (1998) suggest that social capital can "*substitute for perfect markets and enable agents to economize on transactions costs.*" It is difficult to capture fully the significance of social capital using a formal questionnaire approach. However, such an approach has been used by Fafchamps and Minten (1998), and Lanjouw (2000) among others, who attempt to measure quantitatively the impact of social capital. Using regression analyses Fafchamps and Minten (1998), demonstrate that social network capital raises total sales and gross margins. Similarly, Lanjouw (2000) in his study of the non-farm economy in Mexico's *ejidos*, uses a social capital index and found that *ejidos* with a higher score were significantly less likely to be poor.

---

<sup>17</sup> Fafchamps, Marcel, and Minten, Bart. 1998. *Returns to Social Capital Among Traders*, Markets and Structural Studies Division Discussion Paper 23, IFPRI, Washington DC.

### 3.2 Motivation for diversification

- *Risk* may induce people to diversify income. The *risk* inherent in agricultural production may cause single-source income to fluctuate, which can be mitigated by diversifying the portfolio of activities (Reardon, 1998). Economic theory indicates that risk-neutral farmers will divide their labour supply between on-farm and non-farm employment opportunities such that the expected marginal returns to an extra hour of effort/work are equal. If farmers are risk-averse either less time will be allocated to the more risky jobs if the expected returns to each sector are the same, or alternatively the farmer will be willing to accept lower wages in the less-risky environment (Mishra and Goodwin, 1997). Non-farm labour can be used by farmers to reduce the total variance of their income, that is, the overall risk, or to increase the total returns to labour. However, this does not necessarily mean that risks associated with non-farm opportunities are lower than, independent of, or inversely related to on-farm risks – it is more the case that on-farm opportunities are often very limited (Davis and Pearce, 2000). While a combination of the above demand/supply and labour availability conditions must still hold in order for RNFE activities to be viable, price or income shocks may have constituted an additional, or a major reason for individuals to consider diversifying into the RNFE. Price increases (indeed hyperinflation at times), delayed payment of wages, and the collapse of much of the socialist transport and outlet system (implying higher retail transaction costs) are among the real income shocks that rural people have experienced during transition. This would imply that they are willing to pay a risk premium, in which case non-farm rural production could be less productive than food production and still expand.
- *Seasonality*. Seasonal labour and asset employment of agricultural production may be another reason for the growth of the RNFE. Using idle labour or machinery and empty buildings for non-agricultural activities may supplement incomes without capital investments and at low opportunity costs. As the demands of agricultural production on labour and capital are usually seasonal, this motive would imply a strong competitive position for rural non-farm producers, since revenue and profits are practically equal since additional costs of existing assets are fairly small. It would restrict non-farm activities to those that are farm-asset based or capital intensive. It would also interact with the risk motive as it stabilises income over time.

### 3.3 Factors enabling growth of the RNFE

At the group (village, regional) level, the factors stimulating diversification are mainly the same as those that stimulate economic growth, which implies that we can consider diversification from the viewpoint of (endogenous) growth theory<sup>18</sup>. Relevant factors include the following:

---

<sup>18</sup> The new growth economics approach assumes the presence of important externalities when combining labour and capital with an increasing amount of knowledge. The gains from education, e.g., are not simply determined by how much a person's productivity is raised by their investment in education, but is also the result of interaction with many well-educated people and this constitutes positive externalities. An effective enabling institutional environment and good governance at all levels of administration operates in a similar way. Therefore, overall, models of economic growth make clear that productivity growth as well as capital formation (real and human capital) are both critical to achieve high rates of growth in per capital GNP (Gillis *et. al.*, 1996) and thus sustainable livelihoods (see Breitschopf and Schreider, 1999).

- An important factor in growth prospects is *local natural/ physical resources*. However, although production is obviously predicated on productive resources, resources endowment is not necessarily an important factor in understanding growth patterns, for two reasons. First, given a set of factor endowments there are many possible uses, each of which may or may not generate growth. How resources are used is crucial to growth, but it is not determined by the mere presence of resources. An illustration of this is a study by Bernstein and Weinstein (1998), who statistically examine the relationship between factor endowments and production patterns using international and Japanese regional data. They find evidence of substantial production indeterminacy, a result which implies that regressions of trade or output on endowments have weak theoretical foundations. An additional factor, which complicates the link between resources and growth, is the possibility of a 'resource curse' or 'Dutch disease' (Auty, 1994; Kim, 1998). Countries that are richly endowed with primary (e.g. mineral) resources tend to specialize in the production and export of it, more so than other countries. Since the economic returns to this are low relative to alternative development paths, such as expanding the trade or services sectors, resource abundance may crowd out high-productivity alternatives and so impede growth.
- *Quality of local government* (corruption, aid programs, consistency of policies and their implementation) expressed, for instance, by levels of corruption, government stability, policy volatility (mostly measured as monetary impulses) the annual number of coups and revolutions, or, sometimes, the level of democracy. See Moers (2000a) for an overview of the literature and Moers (2000b) for an empirical analysis in transition countries. In this area, one would look for a rural-urban difference in corruption levels, bureaucratic quality, or the nature of civic society that can help explain differences in economic activities. Governments are typically insensitive to RNFE development and the agricultural paradigm usually dominates. In case of intervention, actions by local administrative bodies seem most appropriate (Haggblade et al, p.20). They have probably less urban bias, are more knowledgeable about rural needs, and operate more efficiently at the local level.
- *Local physical infrastructure* including density of the road and telephone networks and household services is an important aspect of the RNFE and growth (see Lanjouw and Feder, 2001). Jalan and Ravallion (1998) find that road density is one of the determinant of household-level prospects of escaping poverty in rural China. Komives et al. (1999) find that there is a divide in access to household facilities (electricity, water, sewer, and telephone services) between urban and rural households, with the exception of Eastern Europe and Central Asia. Here, the rural have relatively higher levels of coverage.
- *Proximity to Towns, Linkages with Urban Areas*. Rural growth often depends on links with urban areas, either through the acquisition of manufactures or of consumption goods, or through commuting incomes, or through the marketing of rural produce in towns. Rural towns are also important for the following reasons: public service provision, information, credit services, economies of scale and agglomeration, etc. Also, rural towns can function as ports towards the national or global market for rural producers (World Bank 2000).
- *Trade and Regional growth*. Some economists stress that trade is important for growth; others maintain that production linkages', implying a barrier to entry for prospective

trading enterprises constitutes an alternative path to growth. Rauch (1997) shows that both views may be reconciled. Another alternative to trade-led growth is import substitution (IS). Srinivasan and Bhagwati (1999) give an overview of arguments in the trade versus IS debate, argue that the costs of IS are greater than its benefits. They cite studies showing the weak theoretical foundations and the use incorrect methods deployed in support of IS; and that trade is still the best growth option. Does openness, apart from influencing growth, also affect inequality, and by, implication, would the transition affect rural/urban inequality? Theoretically, this is ambiguous. It depends on factor endowments, the type of openness (trade flows, capital flows, or labour flows), and on complementarity and substitutability of factors of production, and on the distribution of endowments over individuals on different income levels. Empirically, the openness-inequality connection researched in regression analyses has suggested impacts in both directions in different countries (O'Rourke, 2001). There is also empirical evidence that labour mobility may be a factor in decreasing inequality and thus rural poverty. Razin and Yuen (1996) show that labour mobility is capable of generating income level equalization across regions in the presence of knowledge spillovers, while restrictions on labour flows tend to make individual region/country per capita income more divergent.

### 3.4 Socio-cultural aspects of RNFE growth

- *Ethnicity and ethnic heterogeneity.* Where a number of different ethnic groups live in the same area, whether in the same village or not, anecdotal evidence suggests that it is often the case that there is occupational specialisation along ethnic or ethno-religious lines, which affects both current participation in different occupations and the potential which individuals and households have for diversification (see Fafchamps et. al., 1998). For example, Smith et. al., (2000) in their study of two districts in Uganda found it's diverse social ethnic structure has played a critical role in governing access to resources and thus patterns of rural livelihood diversification. Bleahu and Janowski (2001) maintain in the case of Romania that it would seem that some ethno-religious groups have internal social characteristics, which make it relatively easier for them to diversify out of subsistence agriculture. This is likely to enable members of that group to collaborate in for example marketing agricultural products. It also enables members to succeed in entering non-agricultural activities - where one member is already involved in a certain occupation niche he or she will facilitate the involvement of other members of the ethnic group. This is what has happened in Transsylvania, where ethnic Germans ("Saxons") appear to be much better at helping each other gain entry to non-farm retail trading activities than their ethnic Romanian neighbours within the same village (Bleahu, 2002;). Consequently this group has had an involvement in trade and commerce which the Romanian ethnic group does not have because they operate more effectively through networks of kin and neighbours. Bleahu and Janowski (2001) also note the impact of discriminating against particular ethnic groups, in their study Roma gypsies, who were essentially excluded from accessing most forms of local employment. Ethnicity is one dimension of social capital.
- *Gender and cultural aspects of RNFE access.* Religion and a variety of cultural factors may mean that there is a preference for involvement in certain types of non-farm livelihood activity on the part of all members of a community or on the part of some section of the community. There are often activities, which are seen as undesirable by members of certain castes/classes or certain ethnic groups. There are also activities, which are seen as inappropriate for certain, categories of individuals, according for

example to gender or age. Access barriers may also be related to caste or class divisions, to ethnicity, language or other cultural factors (aspects of social capital). High status groups of all kinds, including high castes and high status/majority ethnic groups, may gain access more easily to more remunerative non-farm activities. Individuals and households belonging to low status groups, on the other hand, find it difficult to diversify into better-paid sectors, and tend to be forced into certain less remunerative non-farm activities. In many LDCs women play a key role in farming and non-farm ancillary services. They are often responsible for sale of produce and for subsistence production (see Canagarajah, et.al., 2001). Women have a strong influence in the family in both providing and promoting the education of farm children. Therefore, they may warrant targeted programmes in both extension and education, for example for non-farm and on-farm financial record keeping and organisation. Women also often play a key role in activities such as agro-tourism, weaving, light manufacturing work etc, which often require credit and other aids for small business assistance. Finally, Smith et. al., (2000) found that in Uganda culturally proscribed gender roles can shift when the household is under pressure to bring in sufficient food and income to survive. Conflict, economic deterioration and the impact of AIDS have intensified the burden on women, with an increase in female-headed households that have in many cases been forced into livelihood diversification. In the case of Rakai, women have received targeted support from non-governmental organisations (NGOs) in the form of technical and financial assistance to handicrafts groups, and to a lesser extent baking groups.

- *Regional human and social capitals* are measured by the level of education of the population, the level of trust, and the intensity of civic society (i.e. number of associations and clubs). Note that this is a group characteristic, and as such distinct from the educational level, skills, and connection that a single individual / household / farmer / farm manager may have. Putnam in his study of Southern Italy showed that social capital (e.g. networks, norms, trust) co-ordinates actions and is an asset in economic growth; see also Temple (2000) for an overview of macroeconomic performance and social capital, and Fukuyama (1995) on trust as an instance of social capital.

### **3.5 Linkages between the farm and non-farm economy**

Hazell (1989, 1998) states that one reason why the RNFE should be actively encouraged is because, when agriculture grows, the rural economy benefits from powerful income and employment multipliers. In many developing countries, discrimination against small rural non-farm firms constrains the effects of these multipliers. As previously noted, the prevailing conception is that RNFE activities have close links with the agricultural sector (Heidhues *et al*, 1998; and Davis and Gaburici, 1999 provide evidence of this in Romania). Although this section focuses on the linkages between the farm and rural non-farm economy, these must also be viewed within the context of broader links. The World Bank (Csaki *et al.*, 2000) emphasises the links between the rural sector and all other sectors of the economy – not only those between the rural sector and the agricultural sector. In contrast to the distinction used in Table 1, they argue for a cross-sectoral context to rural development due to ‘the “connectedness” of rural residents to many economic sectors, only one of which is agriculture’. For example, rural industry has strong links with the urban sector, both due to the market provided by the urban area and due to the links between firms – which may be either competitive or complementary: rural enterprises may provide components for urban firms, or may assemble or finish their products (Islam, 1997).



The farm and non-farm economy may be directly linked via production activities, or indirectly linked through incomes or by investment (Reardon *et al.*, 1998). Production linkages may be either upstream or downstream: upstream linkages occur either when the farming sector grows and induces growth upstream in the supply of inputs and services, or when growth of local manufacturing and services reduces the price and increases the availability of inputs upstream; downstream linkages take place when activities, such as agro-processing and distribution, that rely on farm inputs are increased and thus increase the demand for farm products. Income linkages occur when income earned in one sector is spent on the outputs of the other, and investment linkages take place when profits from one sector are invested in the other. All these linkages are of importance in the development of non-farm enterprises in LDC and transition economies. However, linkages may be weak and the strength of different linkages is context specific and depend on a number of factors. On production linkages, for example, constraints downstream in the RNFE may raise processing and distribution costs and so inhibit farm sector development, or upstream RNFE constraints may raise input and services costs (Reardon *et al.*, 1998). Increased opportunities for rural non-farm employment would absorb the excess labour found in agriculture and tend to result in increased labour productivity (Christensen and Lacroix, 1997).

### **3.6 RNFE, Poverty and Inequality**

We now turn from the constraints and conditions of RNFE growth to its possible consequences. One of the reasons that diversification of the rural economy is now a subject of interest is its potential to reduce income inequality and thus rural poverty. Again, this concern is also central to the growth literature, especially as applied to the developing world. We focus on this and related literature on growth and diversification. In treating diversification as a particular form of economic growth and exploring the relation between diversification and income inequality, a conceptual difficulty should be noted. There is evidence that income inequality is often associated with take-off economic growth or with economic shocks in general. Thus, economic growth may imply an increase in inequality. As such, it is often a symptom of economic development rather than a problem in itself.

Jian, Sachs, and Warner (1996) find divergence in China between coastal and inland regions due to the 'economic zones' policy. Ferreira (1997) investigates the distributional consequences of policies and developments associated with the transition from central planning to a market system. The model suggests that even an efficient privatization designed to be egalitarian may lead to increases in inequality (and possibly poverty), both during the transition and in the new steady state. Another reason why growth generates inequality is that it starts in a locality, because typically there are location economies. This implies that growth is accompanied by the formation of a centre of economic activity (Hanson, 1996), where incomes are probably higher.

If income levels and growth rates that are relatively low in some (often rural) regions seem often associated with economic growth, is there still a case for aiming at a reduction in inequality? There are two rationales for such a policy aim. First, extreme inequality and poverty may be problematic for social reasons, while there is also evidence that it actually impedes growth. Second, it may be so that only some sorts of growth increase urban-rural income inequality.

There is not always a growth-inequality trade-off. Barro and Sala-i-Martin (1991, 1992, 1995) have found a tendency towards convergence among the U.S. states, among Japanese prefectures, and among regions within Western Europe. Also for poorer countries, empirical work in Bangladesh shows that growth, reducing poverty in both urban and rural areas, is associated with rising inequality only in urban areas (Woodon, 1999). This finding reflects a large strand of literature on the conditions for growth to be pro-poor, focused particularly on rural areas (e.g. Ravallion and Datt, 2002; Khondker et al 2001).

Just as inequality, urbanisation is often defined as part of the rural development problem, while it is also often a symptom of economic growth on the national level. The degree of urbanisation is an indicator of economic development at low levels of per capita income. There is evidence that there is a best degree of national urban primacy, which increases sharply up to a per capita income of about \$5000 (PPP 1987 income), before declining modestly. The best degree of primacy declines with country scale (Henderson, 2000). This would imply that urbanisation, and thus dwindling rural populations, as such should not be viewed as problematic in developing and transition countries, where per capita incomes are generally lower. Indeed, in an exploration of urban and regional dynamics in Poland after the transition, Deichmann and Henderson find that the degree of urbanization and primacy remains low in Poland. The largest cities are not growing at the rate that would be expected if post-transition adjustments were operating freely. As a result, Poland is not fully realizing external economies from urban agglomeration, probably due to housing shortages and low labour mobility.

Having this in mind, we now consider if and how rural diversification, through the generation of non-farm income, can reduce rural poverty by decreasing inequality. We have already noted that the small share of full-income farms in CEE imply a potentially major role for the non-farm economy in rural areas. In addition, extensive evidence of the role of non-farm income generation in other LDC settings is a reason to investigate its potential in the CEE context. For example, Lanjouw (1995) maintains that the non-agricultural rural sector (in his definition comprising non-farm businesses) represents a potentially important route out of poverty in Ecuador. Poverty declines as the share of income from non-agricultural sources rises. Non-agricultural employment and earnings are positively associated with better education and infrastructure access. Poverty could be expected to fall substantially with expansion in the following non-farm sectors: construction, transport, commerce, and services. Lanjouw (2001) has also analysed a recent household survey for Ecuador to assess the impact of the non-agricultural rural economy in reducing poverty. That sector accounts for roughly 40 percent of rural incomes in Ecuador, three-fourths of which comes from non-agricultural enterprises as opposed to wage labour. The sector provides employment to nearly 40 percent of economically active men and 50 percent of women. This survey shows that, all other things equal, the greatest fall in poverty could be expected from expanding employment opportunities in transport, commerce-related activities, and such services as administration and the hotel and restaurant trade. Although the evidence is from LDCs (as in Adams (1995,1997) and Islam (1997)), it is worthwhile to considering whether it is relevant also to rural areas in transition countries. And if so, which factors stimulate equity enhancing diversification?

Reardon et al (1998) have identified a number of conditions for the development of the RNFE to be more equality enhancing which include proximity to urban markets, physical and market infrastructure, and resource endowments the distribution of productive resources within rural areas. Piesse et al (2001) show that access to markets increases the poverty reduction potential

of the RNFE in Zimbabwe. Deininger and Olinte (2001), studying data from Colombia, find that specialisation, in farm or non-farm activities, increases linearly in wealth and in income levels. The relationship between diversification and wealth/income is a U-shaped curve. This suggests that there are two types of diversification: a low-return refuge from poverty, and a high-return innovative diversification based on high levels of asset endowment and human capital and a well-developed rural infrastructure, including access to credit markets. A similar U-shaped relationship is reported for farms in the developed world, e.g. by Hill, 2001. These observations support the distinction between ‘demand-pull’ and ‘distress-push’ factors in the rural diversification process posed by in section 1. They also explain the recent shift in attitudes towards the RNFE from viewing it as a symptom of backwardness towards a potential motor of the rural economy (Lanjouw and Lanjouw, 1998). Rather than being contradictory, the older view fits the low-income/wealth, ‘poverty refuge’, distress-pushed type of diversification, while the more recent view connects to the high income/wealth, innovative, demand-pull type of diversification.

The implications for the study of the impact of the RNFE on poverty, or income inequality, reduction are the following. First, the increase in diversification in recent years (assuming this exists) may be a positive sign of (renewed) economic viability, or a negative sign of increasing poverty, in line with the above classification. As to which type it is depends on the set of factors identified above, which may well be incomplete given the ongoing explorations of the subject (Deininger and Olinte, 2001).

## **4 RNFE Policy processes**

This study has explored some of the scale and definitional complexities underlying the RNFE, and showed how susceptible it is to a wide variety of trends, shocks and processes. Among these wide-ranging influences, we need to be able to determine the extent to which the RNFE can be treated as a distinct entity, and therefore assess how much it might specifically be liable to being influenced by policy initiatives. Can the RNFE be identified in such a way that it is susceptible to separate analysis and therefore amenable to distinct policy interventions?

The difficulty is not only in the heterogeneity of the activities. It is also the fact that in many cases where there is an expansion of non-farm activities, it may be a consequence of a wide range of influences. These may include changes in the agriculture sector, as with the Green Revolution in parts of Asia which acted as a driving force for small-scale industrial expansion in rural areas both to supply inputs and process outputs. (Much of the rapid expansion of rural industry and commerce in India’s provinces of Punjab and Haryana can be ascribed to this process). It might be a product of processes like those in China in the early 1980s, with a combination of macroeconomic shifts, local government decentralisation, and decollectivisation of farming coupled with higher procurement prices. In combination these allowed a rapid expansion of agricultural output, a resultant rise in incomes (driving consumer demand, especially for house-building), and surplus capital for investment retained by the localities, all of which produced an enormous expansion in small-scale industry and commerce. The most successful places for this were also in coastal provinces, and many also benefited from the newly-permitted influx of foreign investment.

The issues relating to potential expansion of the RNFE range from the overall impacts of economic growth in the wider economy (which may or may not have a positive effect on the RNFE), through the (supply-side) increase in investment, the availability of labour for

employment, and the seeking of opportunities in other types of livelihood. It is important to recognise that the last – seeking other livelihoods – includes both those taken up out of preference and choice, and many others which are adopted as a result of crisis, collapse of other activities, i.e. they are distress-driven and survival strategies. These various components form a spectrum of ‘driving forces’ or political-economic environments that affect the potential for growth (or decline) of the RNFE and which have their impact by design or default on its growth.

Governance, as defined by the World Bank (1992) is *‘the manner in which power is exercised in the management of a country’s economic and social resources for development’*. This indicates that governance is different from *government*, and that power may be exercised which is not incorporated into administrative or economic structures that are formally constituted or subject to democratic or other forms of social mediation. Such power may clearly be exercised at the local level, by both local and higher-level players comprising of not only constitutional authority (government), but also the private sector, local elites and expressions of civil society (including co-operatives, NGOs and producer organisations). Decentralisation processes impact directly on local governance. The degree to which decentralisation affects the RNFE positively or negatively will depend essentially on the degree to which it strengthens the efficiency, effectiveness, and relevance of the institutional environment. The institutional environment influences the livelihood strategies of non-farm rural households, through determining their access to and utilisation of a range of livelihood resources (natural, economic, human and social capitals) (see Figure 2). The relationship between local governance and the non-farm rural economy is therefore a complex one, with institutional change and the processes driving it (such as decentralisation and economic reform and restructuring) continually modifying and changing the nature of the relationship.

Clearly the enormous range of issues outlined in this paper demonstrates not only the complexity of the RNFE, but also the fact that policy interventions at one level may also impact others (positively or negatively). Moreover, in terms of poverty-reduction strategies, the need is to recognise that there should be a movement away from distressed or constrained livelihoods towards chosen or superior activities (including the need to avoid wage-labour or self-employment in dangerous or low-pay activities that may represent poor substitutes for existing livelihoods).

Recognition of the complexity of the RNFE and its inter-relationships with wider social and economic processes should enable the reduction of negative knock-on effects elsewhere, sectorally or spatially. Policy design should be shown to operate with positive general equilibrium effects and without displaced negative impacts on the poor (e.g. through harmful income or asset redistribution), or worsening gender inequality, or degradation of the natural environment. Subject to these constraints, and relating to the issues discussed in this paper, key policy questions emerge:

- (i) (Economic growth) Where relevant, what macro-level policies will foster economic growth in the RNFE and which will undermine its development?
- (ii) (Investment) (a) How can reinvestment locally be fostered to enhance local livelihoods (and without significant inefficiencies in opportunity costs of that investment?); and  
(b) How can investment from outside be encouraged which promotes sustainable livelihoods?

- (iii) (Employment) How can waged employment be generated as a significant form of livelihood enhancement?
- (iv) (Chosen livelihoods) What can be done to enhance the opportunities for people, especially the poor, to gain access to more diverse livelihoods;
- (v) (Constrained livelihoods) What circumstances lead to people having to take up distress or coping strategies, and if they are increasing in number what policies can treat the problem? Is the expansion in coping activities in part driven by negative consequences of other policies? How can poor people be enabled to widen their choice of livelihood alternatives such that they are not reliant on endangering natural capital, low-pay and exploitative alternatives to farm poverty?

We should also consider problems from the perspective of rural people themselves, and this can be done in respect to the way livelihood opportunities are constructed through differential access to the five capitals (natural, financial, physical, social and human) that are increasingly familiar in the analysis of sustainable livelihoods (Ellis 1998). Some of the key issues that emerge from this approach include a focus on: property rights, markets, governments, trends & demographics, shocks and stresses, which are designed to abstract some of the key considerations that *a priori* are considered to be of significance in influencing the capital portfolios of people in regard to the promotion of the RNFE<sup>19</sup>. To be effective policy-makers, governments and researchers will need to demonstrate how policy interventions that influence RNFE diversification ‘drivers’ or livelihood frameworks can positively affect the asset holdings of the rural poor. To evaluate the impacts of RNFE opportunities for the rural poor, the following will need to be considered:

- *Property rights systems* means the conglomeration of processes and structures that determines the relations between people and groups of people (including social relations such as class, gender, ethnicity, age) and their differential access to incomes and assets. It incorporates the *de facto* distribution of assets and the property rights that govern this pattern of control, together with the process of appropriation and distribution of surplus within the society. These systems by and large determine the manner in which power is held and operates within societies.
- *Markets* or commercial environments – they may not always be ‘proper/ fully functioning’ markets. This is because although they reflect the way property rights and political systems operate (for example, property rights that determine economic influence also affect market structures significantly).
- *Government* is distinguished for two reasons: firstly, in most societies it claims to be independent of property rights (while providing them with a legal framework) and to be neutral in relation to the way political institutions operate; and secondly it usually claims to be competent in the implementation of policies designed to impact on the economy (for which reason it is seen as the sovereign agent for receipt of and use of most official development assistance [ODA], including policies for the RNFE that may emerge from this work.

---

<sup>19</sup> These are partly derived from the SL Framework and Davis, J., and Robinson, E. (2000) Participation of the poor in the Rural Non-Farm Economy: Conceptual and Practical Considerations, *NRI Social and Economic Series, Discussion Paper No. 5*.

- *Trends and demographics* provide the basis for particular analysis of recognisable patterns of change (in economic systems at any level, or technologies), and both quantitative and qualitative processes affecting the population. This allows scope for discussing direction of change in a range of factors that may have a serious impact (positive or negative) on the RNFE, for instance structural adjustment packages (SAPs). Shocks and stresses allows for further inclusion of distinct events or particular processes that need to be separately identified from the broader trends, in particular the impacts of disasters or epidemics and pandemics. Policies for the RNFE that neglect peoples' vulnerability to hazards or the impact of HIV/AIDS are unlikely to be very robust.
- *Migration* and the associated remittances constitute another route to improved incomes in rural areas, especially where economic opportunities are lacking or limited. Important conditions for smooth migration flows include access to information about job opportunities in different areas, a functioning house market in destination areas, availability of credit to cover initial migration costs, and support in case migrants fail and need to return home. Individuals who have little or no earned income and cannot or are reluctant to migrate must rely on income support from others or the state. Although modest and incapable of sustaining a thriving rural economy, state subventions to both poor individuals and the job creation impact of locating state services in rural areas (such as hospitals, schools etc) generate much-needed local income and provide a source of demand for locally produced goods and services.

## 5 Conclusions

We began this paper by arguing that the RNFE would be discussed as part of a growth strategy for the economy and also as a defensive survival strategy. Macroeconomic factors have a major effect on the RNFE, as they affect general employment opportunities and the institutional framework within which the RNFE functions – in particular, the education system; financial institutions and credit market; factors which influence the development of micro and small-medium enterprises (MSMEs); and the land market and farm structure. Reforms within the agriculture sector also have a major impact on the RNFE due to the linkages between the two sectors, both of a positive and negative nature. In general terms, growth in the farming sector has a positive influence on the RNFE and *vice-versa*, but it is vital that the RNFE is expanded in order to improve rural livelihoods in the long-run when employment in the farming sector is expected to contract.

As the natural resource base has declined in many developing countries, so livelihoods have become less secure and sources of income more varied. However, their stocks of assets of various kinds condition the ability of individuals and households to access non-erosive and accumulative off-farm strategies. At the individual level, health status and education as determinants of human capital are important, particularly education. At the level of the household, gender and age profiles of the household will to some extent determine the pattern of non-farm activities, which can be undertaken. Financial capital, physical capital (infrastructure, especially roads) and the quality of social networks can all be crucial, depending on livelihood circumstances. In several societies, being female represents an important “barrier to entry” to non-farm employment. Diversification in rural incomes may also affect gender relations (women may become more marginalized if they are more constrained than men in their access to non-farm opportunities, or they may be empowered by new opportunities to earn income, and develop skills and networks). Generational

considerations can also be important. Characteristically, it is the young men who migrate, either seasonally or permanently to urban centres for work. The old and women are less likely to undertake this type of strategy in most societies.

The role of off-farm income generation activities is seen as an increasingly important one for the viability and development of rural areas, and for rural households to diversify income sources and enhance livelihood opportunities. The on-farm sector exerts considerable influence on the rural economy, both directly and indirectly, through ancillary and associated industries, and through employment and income multiplier effects. Private sector activity unrelated to the on-farm sector, and generally centred in rural towns, is being viewed as a key area for the development of the rural economy, and also a means of more closely linking rural areas with urban and economic centres. MSMEs play an increasingly central role in public sector initiatives aimed at promoting off-farm economic activity, and the commercialisation of the rural economy (see Davis and Gaburici, 2001).

There remains a question as to whether the RNFE should be left to itself – with national governments and their agencies merely ensuring that the institutional and other reforms continue to progress – or whether it requires positive support/ intervention. We would argue that the latter would be helpful, possibly even essential, but intervention needs to be informed by a clear conception of what the rural sector is likely to look like 10 to 20 years into the future. Experience from less developed countries suggests that broad-based economic growth can under the right conditions reduce the overall poverty level. However, even with growth, there will remain groups, which descend further into poverty. Therefore the national governments and donor community need to identify clear additional interventions that are demonstrably beneficial alongside general economic policies.

## 6 References

- Abdulai, A. and A. CroleRees (2001)* Determinants of Income Diversification Amongst Rural Households in Southern Mali. Food Policy: 26 (4).
- Adams, R. (?)* Non-farm Income, Inequality and Poverty in Rural Egypt and Jordan. Mimeo, PRMPO World Bank.
- Antle, J. (1983)* Infrastructure and Aggregate Agricultural Productivity: International Evidence. Economic Development and Cultural Change, vol.31. no. 3, pp. 609-619.
- Babb, F (1989)* Between Field And Cooking Pot: The Political Economy Of Marketwomen In Peru. Texas Press Sourcebooks in Anthropology, no. 15 Austin: University of Texas Press.
- Barret, C, T. Reardon, and P. Webb (2001b)* Nonfarm Income Diversification and Household Livelihood Strategies in Rural Africa: Concepts, Dynamics, and Policy Implications. Food Policy, 26: 315-31.
- Barrett and Reardon (2000) *Asset, activity and income diversification among African agriculturists: some practical issues*, (unpublished mimeo).
- Barrett, C, M. Bezuneh, and A. Abdillahi (2001a)* Income Diversification, Poverty Traps and Policy Shocks in Cote d'Ivoire and Kenya. Food Policy: 26 (4): 367-84.
- Barrett, C., T. Reardon, and P. Webb (2001)* Nonfarm Income Diversification and Household Livelihood Strategies in Rural Africa: Concepts, Issues, and Policy Implications. Food Policy: 26 (4).
- Bebbington, A. and T Perrault (1999)* Social Capital, Development, and Access to Resources in Highland Ecuador. Economic Geography 75 (4): 395-418
- Bernstein, J. and D. Weinstein (1998)* Do Endowments Predict the Location of Production? Evidence from National and international Data. NBER Working Paper No. W6815
- Bezemer, D. and J. Davis (2003)* The Rural Non-Farm Economy in Armenia. Forthcoming in: Spoor, M. (ed) Transition, Institutions, and the Rural Sector in series: Lerman *et al* (eds) Rural Economies in Transition. Lanham, MD: Lexington Books.
- Bhaduri, A (1989)* Employment and Livelihood: The Rural Labour Process and the Formulation of Development Policy. International Labour Review 128 (6): 685-700
- Binswanger, H., S. Khanker, and M. Rosenzweig (1993)* How Infrastructure and Financial Institutions Affect Agricultural Output and Investment in India. Journal of Development Economics vol. 41, no. 2, pp. 337-366.
- Bleahu, A. (2002)* Social Factors Affecting involvement in Non-Farm Activities in Romania. Paper presented at the Workshop on the Rural Economy in Central and Eastern Europe and the Commonwealth of independent States. National Resources Institute, Greenwich, 6-7 March 2002.
- Block, S. and P. Webb (2001)* The Dynamics of Livelihood Diversification in Post-famine Ethiopia. Food Policy 26 (4): 333-50.
- Breitschopf, B and Schreider G (1999)* Rural development in transition economies – the cases of two counties in Romania. Paper presented at the 48<sup>th</sup> International Atlantic Economic Conference 7-10 October, Montreal.



- Buchenreider, G. and J. Knuepfer (2002) Household Determinants Of Access To Rural Non-Farm Employment In The Balkans. Paper presented at the Workshop on the Rural Economy in Central and Eastern Europe and the Commonwealth of independent States. National Resources Institute, Greenwich, 6-7 March 2002.*
- Canagarajah, S., C. Newman, and R. Bhattamishra (2001) Non-Farm Income, Gender, and Inequality: Evidence from Rural Ghana and Uganda. Food Policy 26 (4).*
- Carter, M and J. May (1999) Poverty, Livelihood and Class in Rural South Africa. World Development 27 (1): 1-20*
- Chirca C and Tesliuc E (eds) (1999) From Rural Poverty to Rural Development, World Bank and National Commission for Statistics, Romania.*
- Christensen G and Lacroix R (1997) Competitiveness and Employment: A Framework for Rural Development in Poland World Bank Discussion Paper No. 383, Washington DC, World Bank.*
- Davis, D. and D. Weinstein (1996) Economic geography and Regional Production Structure: An Empirical Investigation. American Economic Review, vol. 86, no. 5, pp. 1266-1278*
- Davis, J (2002) Constraints and Potential to the Development of Rural Non-Farm Activities in Armenia. Joint Endeavour European Commission and UN-FAO/SEUR GCP/ INT/ 758/ EC-ARM (unpublished mimeo).*
- Davis, J (2002) Diversification of income and employment opportunities: RNFE feasibility study in selected areas in Bulgaria and Romania, UN-FAO/SEUR (unpublished mimeo).*
- Davis, J and Pearce D (2001) The Rural Non-farm Economy in Central and Eastern Europe. in Lerman, Z and Csaki, C. (2001) 'The Challenge of Rural Development in the EU Accession Process' World Bank Technical Publication Washington DC, World Bank.*
- Davis, J. (2001) Conceptual Issues in Analysing the Rural Non-Farm Economy in Transition Economies. in *NRI Social and Economic Series. Report No. 2635*.*
- Davis, J. (2001) Sustainable Non-Farm Rural Livelihoods in Transition Economies: Understanding the access and capacity constraints, *Eastern European Countryside*, Vol. 7, 2001.*
- Davis, J. and Cristoiu, A. (2002) Patterns of rural non-farm diversification and employment in Romania: A county level analysis. *NRI Social and Economic Series Report No. 2639*.*
- Davis, J. and Gaburici, A (2001) Non-Farm Employment in Small-Scale Enterprises in Romania: Policy & Development Issues in *NRI Social and Economic Series, Report No. 2637*.*
- Davis, J.R. and Gaburici, A., (1999). The economic activity of private farms in Romania during transition, *Europe-Asia Studies*, Vol. 51, No. 5, 1999 pp.843-869.*
- Davis, J., and Robinson, E. (2000). Participation of the poor in the Rural Non-Farm Economy: Conceptual and Practical Considerations, *NRI Social and Economic Series*, (unpublished mimeo).*
- Deichmann, U. and V. Henderson (2000) Urban and Regional Dynamics in Poland. World Bank Policy Research Working Paper nr 2457.*
- Deichmann, U. and V. Henderson (2000) Urban and Regional Dynamics in Poland. World Bank Policy Research Working Paper nr 2457.*

- Deiniger, K. and P. Olinte (2001) Rural Nonfarm Employment and income Diversification in Colombia. World Development, vol. 29, no. 3, pp. 455-465
- Ellis (1998) *Survey Article: Household Strategies and Rural Livelihood Diversification in Developing Countries*, Journal of Agricultural Economics 51(2): 289 – 301.
- Ellis, F. (2000a) The Determinants of Rural Livelihood Diversification in Developing Countries. Journal of Agricultural Economics. Vol. 51 (2): 289-302.
- Ellis, F. (2000b) Rural Livelihoods and Diversity in Developing Countries. Oxford: Oxford University Press
- Ellman, M.J. (2000) The Russian Economy Under El'tsin. Europe Asia Studies, 52(8):1424
- Fafchamps and Minten (1998) *Returns to Social Capital Amongst Traders* Markets and Structural Studies Division Discussion Paper 23 IFPRI, Washington DC.
- Feder, G. (1986) Growth in Semi-industrial Countries: A Statistical Analysis. In: H. Chenery, S. Robinson, and M. Syrquin (eds.), Industrialization and Economic Growth New York: Oxford Economic Press
- Ferreira, F (1997) Economic Transition and the Distributions of Income and Wealth. World Bank Policy Research Paper no. 1808
- Ferreira, F. and P. Lanjouw (2001) **Rural Nonfarm Activities and Poverty in the Brazilian Northeast**. World Development 29 (3): 509-28
- Gordon (1999) *Non Farm Rural Livelihoods* NRI Policy Series 4.
- Gordon, A and C. Craig (2001) Rural Nonfarm Activities and Poverty Alleviation in Sub-Saharan Africa. Policy Series No.14 University of Greenwich, Natural Resources Institute.
- Grootaert, C. (2000) Social Capital, Household Welfare, and Poverty in Indonesia World Bank Policy Research Paper no. 2148
- Grootaert, C. and Narayan (2001) Local institutions, Poverty, and Household Welfare in Bolivia. World Bank SDFESSDN Working Paper.
- Haggblade, Hazell and Brown (1989) *Farm Non-Farm Linkages in Rural Sub-Saharan Africa* World Development 17(1989): 1173 – 1201.
- Haggblade, S., P. Hazell, and J. Brown (1989) Farm-Nonfarm Linkages in Rural Sub-Saharan Africa. World Development, vol. 17, no. 8, pp. 1173-1201.
- Haggblade, S., P. Hazell, and T. Reardon (2002) Strategies for Stimulating Poverty-Alleviating Growth in the Rural Nonfarm Economy in Developing Countries. International Food Policy Research paper. Washington, D.C.: IFPRI
- Hanson, G. (1996) Localization Economies, Vertical Organization, and Trade. American Economic Review, vol. 86, no. 5. Pp. 1266-1278.
- Harper, D. and L. StLouis (1999) Regional Economic Diversification and Efficiency: Baumol's Likely Lower Confidence Limit Measure of Risk. Review of Regional Studies 29 (2): 197-211
- Haug, R (1999) From Integrated Rural Development to Sustainable Livelihoods: What Is the Role of Food and Agriculture? Forum for Development Studies 10 (2): 181-201
- Hedlund, E. and E. Sundstrom (1996) The Russian economy after systemic change, Europe-Asia Studies (48) 6: 900-901

- Helliwil, J. (1996) Do Borders Matter for Social Capital? Economic Growth and Civic Culture in U.S. States and Canadian Provinces. NBER Working Paper no. W5863
- Henderson, V (2000). How Urban Concentration Affects Economic Growth. World Bank Policy Research working Papers Nr 2412.
- Hill, B. (1999) Farm Household Incomes: Perceptions and Statistics. Journal of Rural Studies vol.15, pp. 345-58
- Imbs, J. and R. Wacziarg (2000) Stages of Diversification. London: NBER Working Paper 2642
- Jalan, J. and M. Ravallion (1998) Geographic Poverty Traps? Institute for Economic Development, Discussion Paper no. 86, Boston University.
- Jamal, V. and J. Weeks (1993) Africa misunderstood or whatever happened to the rural-urban gap? ILO Studies. London: Macmillan Press
- Janowski, M. (2002) Social Factors Affecting Household Level Involvement in the RNFE in Armenia, Georgia, and Romania: Lessons Learned. Paper presented at the Workshop on the Rural Economy in Central and Eastern Europe and the Commonwealth of independent States. National Resources Institute, Greenwich, 6-7 March 2002.
- Jian, Sachs, and Warner (1996) Trends in Regional Inequality in China. NBER Working Paper no. W5412.
- Knight, J, and L. Song (1997) Chinese Peasant Choices: Farming, Rural Industry, or Migration. University of Oxford Applied Economics Discussion Paper Series no. 188
- Komives, K., D. Whittington and X, Wu (2001) Infrastructure Coverage and the Poor: A Global Perspective. World Bank Policy Research Paper no.2551
- Lanjouw, J and P. Lanjouw (1995) Rural Nonfarm Employment: A Survey. World Bank Policy Research Paper no. 1463.
- Lanjouw, P. (1998a) Ecuador's Rural Nonfarm Sector as a Route Out of Poverty World Bank Policy Research Paper no. 1904
- Lanjouw, P. (1998b) Poverty and the Non-Farm Economy in Mexico's Ejidos: 1994-1997. Mimeo, Free University of Amsterdam and DERC, World Bank
- Lanjouw, P. (1999) Rural Nonagricultural Employment and Poverty in Ecuador. Economic Development and Cultural Change 48(1): 91-122.
- Lanjouw, P. (2001) Nonfarm Employment and Poverty in Rural El Salvador. World Development 29 (3): 529-47
- Lanjouw, P. and F. Ferreira (2000) Rural Non-Agricultural Activities and Poverty in the Brazilian Northeast. Economics Department of PUC-Rio Discussion Paper 428 .
- Lanjouw, P., J. Quizon, and R. Sparrow (2001) Non-Agricultural Earnings in Periurban Areas of Tanzania: Evidence from Household Survey Data. *Food Policy*, Next Issue.
- Leibbrandt, M., C. Woolard, and I. Woolard (2000) The Contribution of Income Components to Income Inequality in the Rural Former Homelands of South Africa: A Decomposable Gini Analysis. Journal of African Economies 9 (1): 79-99
- Lewis, A.W. (1954) Economic Development With Unlimited Supplies of Labour. Manchester School of Economics and Social Studies 22:139-191

- Minde and Nankhumwa (1997) *Informal Cross-Border Trade Between Malawi and Her Neighbouring Countries*. Report for Technoserve Inc., Nairobi, Kenya, March 1997  
Funded by USAID Regional Economic Development Support Office for East and Southern Africa (REDSO/ESA) and executed by Agricultural Policy Research Unit (APRU) Bunda College of Agriculture, University of Malawi.
- Morrison, B. (1980) Rural Household Livelihood Strategies in a Sri Lankan Village. The Journal of Development Studies. 16 (4): 443-62
- Pearce, D., and Davis, J. R.. (2000). The Role of the Non-Farm Rural Sector in the Reconstruction of the Balkans, MOST-MOCT: Economic Policy in Transition Economies, Vol. 10, Issue 2, 2000, pp. 207-228.
- Piesse, J. and C. Thirtle (2001) Leveller for Some? Non-Farm Income and Equality in Zimbabwe. Mimeo, Birkbeck College, University of London.
- Piesse, J., J. Simister and C. Thirtle (1999) Leveller for Some? Non-Farm Income and Equality in Zimbabwe. Mimeo, Birkbeck College, University of London.
- Poirson, H. (2000) Factor Reallocation and Growth in Developing Countries. IMF Working Paper WP/00/94.
- Razin, A. and Chi-Wa Yuen (1996) Labor Mobility and Fiscal Coordination. NBER Working Paper No. W5433.
- Reardon T, Stamoulis K, Cruz M-E, Balisacan A, Berdegue J and Banks B (1998) Rural Non-Farm Income in Developing Countries. The state of food and agriculture 1998: Part III Rome, Food and Agricultural Organisation of the United Nations. Internet address: <http://www.fao.org/docrep/w9500e/9500e02.htm>
- Reardon, T. (1997) Using Evidence of Household Income Diversification to Inform Study of the Rural Non-farm Labour Market in Africa. World Development, vol. 25, no. 5, pp. 735-747.
- Reardon, T. (1999) Rural Non-Farm income In Developing Countries. Mimeo, FAO.
- Reardon, T. E. Crawford, and V. Kelly (1994) Links Between Nonfarm Income and Farm Investment in African Households: Adding the Capital Market Perspective. American Journal of Agricultural Economics, Vol. 76, No. 5, pp.1172-1176.
- Reardon, T. J. Taylor, K. Stamoulis, P. Lanjouw, and A. Balisacan (2000) Effects of Nonfarm Employment on Rural Income Inequality in Developing Countries: An Investment Perspective. Journal of Agricultural Economics, vol. 51, no. 2.
- Reinert, K. (1998) Rural Non-Farm Development: A Trade-Theoretic View. Journal of International Trade and Economic Development, 425-437.
- Roberts, D. (1998) Rural-Urban Interdependencies: Analysis Using an Inter-Regional SAM Model. European Review of Agricultural Economics, 506-527.
- Sarris, A, T. Doucha, and E. Matijs (1999) Agricultural Restructuring in Central and Eastern Europe: Implications for Competitiveness and Rural Development. European Review of Agricultural Economics, 305-329
- Schultz, T.W. (1954) Transforming Traditional Agriculture. New Haven and London: Yale University Press.
- Seppala, P. (1996) The Politics of Economic Diversification: Reconceptualizing the Rural Informal Sector in South-east Tanzania. Development & Change. 27 (3): 557-78

- Shorrocks, A. (1982) Inequality Decomposition by Factor Components. Econometrica, 193-211.
- Smith, D. (2001) Livelihood Diversification in Uganda: Patterns and Determinants of Change across Two Rural Districts. Food Policy. Vol. 26 (4): 421-35.
- Smith, D. R. A. Gordon, K. Meadows, and K. Zwick (2001) Livelihood Diversification in Uganda: Patterns and Determinants of Change Across Two Rural Districts. Food Policy, next issue
- Start, D. (2001) The Rise and Fall of the Rural Non-farm Economy: Poverty Impacts and Policy Options. Development Policy Review, 19 (4): 491-505.
- Swain, N. (1999) Rural development and social change in the post socialist central European countryside, Zemledelska Ekonomika, 45, (2): 79-84.
- Swinnen, J. and E. Mathijs (1999) The Economics of Agricultural Decollectivization in East Central Europe and the Former Soviet Union. Economic Development and Cultural Change, 1-26.
- Tykkyläinen, M. (1996) (ed.) Local and Regional Development During the 1990s Transition in Eastern Europe. Aldershot etc. : Avebury.
- Van de Walle, D. (1999) Assessing the Impact of Rural Road Projects. World Bank, Development Research Group.
- Visser, O. (2003) Farm Restructuring, Property Rights, and Household strategies in Rural Russia. Forthcoming in: Spoor, M. (ed) Transition, Institutions, and the Rural Sector in series: Lerman *et al* (eds) Rural Economies in Transition. Lanham, MD: Lexington Books.
- Vogel, S. (1994) Structural Changes in Agriculture: Production Linkages and Agricultural Demand-Led industrialisation. Oxford Economic Papers, 136-156.
- Wei, S-J, and Y. Wu (2001) Globalization and Inequality: Evidence from Within China. NBER Working Paper No. W8611
- Whiteside (1998) *When the Whole is More Than the Sum of The Parts: The Effect of Cross-Border Interactions on Livelihood Security in Southern Malawi and Northern Mozambique*. Oxford: Oxfam UK.
- Woldehanna, T. (2000) Economic Analysis and Policy Implications of Farm and Off-farm Employment: A Case Study in the Tigray Region of Northern Ethiopia. Ph.D. thesis, Wageningen University, the Netherlands.
- Woodon, Q. T. (1999) Growth, poverty, and inequality : a regional panel for Bangladesh. World Bank Policy Research Working Paper 2072. Washington, DC: World Bank
- World Bank (2000) The Rural Non-Farm Economy: Report on Presentations and Discussions at World Bank: <http://www.worldbank.org/research/rural/workshop/May2000/RNFEmay.pdf>
- World Bank (2000a) Rural-Urban Linkages and Interactions: Synthesis of Issues, Conclusions, and Priority Emerging from the March 9 Workshop. At <http://www.worldbank.org/research/rural/workshop.htm>



FS 54723  
ISO 9001



THE QUEEN'S  
ANNIVERSARY PRIZES  
2000 & 2002

Enterprise Trade and Finance Group  
Natural Resources Institute  
University of Greenwich at Medway  
Central Avenue  
Chatham Maritime  
Kent ME4 4TB  
United Kingdom

Tel: +44 (0)1634 883199  
Fax: +44 (0)1634 883706  
Email: [nri@greenwich.ac.uk](mailto:nri@greenwich.ac.uk)  
<http://www.nri.org/rnfe/index.html>